

KIT AIRCRAFT PROFILE



Not everyone can own a Cub, but anyone can build a CUBy.

Okay. Carb heat, and chop the throttle. Let the airspeed bleed off. Now, lower the nose to about...there. We're a little high; slip her a bit. Level off about eight feet above the grass and let her settle on all three.

With a *thwump ka-thump*, the little airplane touched down and rolled a few feet before coming to a stop, its engine idling smoothly and the wind nibbling eagerly at the fabric-covered control surfaces and fuselage.

Dick Wagner had talked me through my first taildragger landing. The short flight over the rolling green-and-golden meadows of Wisconsin had been exhilarating. No buttons, digital displays or urgent voices crackling through a speaker—just the sounds of engine and slipstream and gentle motions and pressures promising that a great deal about flying could be learned and enjoyed, if I would just listen and feel.

Has to be a Cub, you say?

Well, almost. From a distance, the airplane looks just like a Piper Cub. Closer in, the yellow-on-one-side, green-on-the-other paint job reveals the airplane's true identity. It is a CUBy Sport Trainer—a full-size replica of the venerable Piper Cub—that easily can be built from plans and materials kits offered by Dick Wagner's company, Wag-Aero, Incorporated.

Those with an eye for detail will spot more subtle differences. Unlike the Cub, the CUBy does not have a hole through its fuselage just forward of the horizontal stabilizer. In the Piper Cub, the hole allows the stabilizer to be adjusted for pitch trim, but it takes a toll in drag. With a fixed stabilizer and no hole to trap the slipstream, the CUBy is nine mph faster at cruise than the Cub. An elevator tab provides pitch trim.

Another distinctive feature is a fuel cap on top of the CUBy's left wing. It feeds a 24-gallon tank that drains by gravity to replenish the regular 12 gallon nose tank. With the auxiliary fuel tank, the CUBy has

a range of about 385 nm, compared to about 192 nm for the Cub. The CUBy also has a bigger spar and heavier wing struts, which allow an increase in gross weight from the Cub's 1,230 pounds to 1,400 pounds.

The basic materials kits cost a total of \$6,462 and include everything needed to build a CUBy, except the engine, the propeller and fabric. The materials are prefabricated, so the builder needs only normal shop tools and an oxyacetylene torch.

"The majority of CUBys are built by first-time builders. So, we have tried to eliminate

the need for the kinds of tools the normal guy just does not have," Wagner said. "But you still are going to have to do a lot of thinking and a lot of work to put one of these airplanes together."

Wagner said the average building time of 1,150 hours for the CUBy can be reduced by ordering a pre-welded fuselage, landing gear, wing ribs and shock struts. A pre-welded fuselage costs \$3,145, compared with about \$750 for that materials kit.

Engines ranging from 65 hp to 125 hp are recommended for the CUBy Sport Trainer. Engines and propellers also are available from Wag-Aero, which is the exclusive North American distributor for Rolls Royce Continental O-200 and O-240 engines.

Optional materials kits are available to build the CUBy Acro Trainer, which has shorter wings and beefier wing and fuselage fittings, and the CUBy Observer, a replica of the military L-4 liaison airplane.

Wag-Aero also offers complete, prefabricated materials kits for the Wag-A-Bond, a replica of the Piper Vagabond, and the Acro Sport II, an aerobatic biplane.

Wagner formed Wag-Aero 28 years ago. The company has become one of the leading aircraft parts suppliers in the country. Many of the 6,500 items offered in its catalogue are fabricated at Wag-Aero's immaculate facilities in Lyons, Wisconsin.

"The shop operates under a Federal Aviation Administration parts manufacturing authority," Wagner said. "That means that all materials that come in our door get the same inspection, whether they are going to be fabricated into parts for certificated aircraft or for our kit airplanes."

The CUBy is the company's most popular kit airplane. For years, the Piper Cub has been the embodiment of grass-roots flying. For those who are willing to devote a reasonable amount of money and effort, the CUBy can be a dream come true. —MML

CUBy SPORT TRAINER

Kit price* \$6,462

Construction Wood, metal and fabric
Time to build (est) 1,150 hr

Specifications

Engine 65-hp to 125-hp Lycoming, Continental or Franklin
Wingspan 35 ft 2.5 in
Length 22 ft 2.7 in
Height 6 ft 8 in
Wing area 178.5 sq ft
Seats 2
Empty weight 720 lb
Useful load 680 lb
Gross weight 1,400 lb
Fuel capacity
Standard 12 gal
Auxiliary 38 gal
Baggage capacity 20 lb

Performance

Takeoff distance (ground roll) 370 ft
Rate of climb 490 fpm
Maximum speed 88 kt
Cruise speed 82 kt
Range
Standard fuel 192 nm
Auxiliary fuel 385 nm
Fuel consumption 4.8 gph
Service ceiling 12,000 ft
Landing distance (ground roll) 290 ft
Stall speed 34 kt

* Engine and fabric not included.

Based on designer's figures.